

Patent Abstracts of Japan

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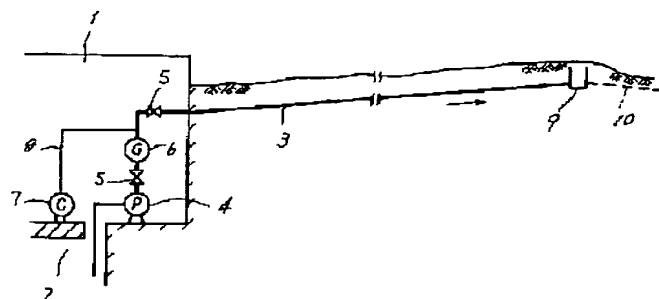
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TITLE : METHOD OF CALCULATING AIR
INJECTION QUANTITY INTO SEWAGE
FORCE FEED PIPE



ABSTRACT : PURPOSE: To inject a necessary quantity of air by preliminarily making a model of oxygen consuming speed in a sewage in a determined time band, and determining oxygen consumed quantity in each time band from the residence time of the sewage in a pipe from the start point to the end point.

CONSTITUTION: A sewage force feed pipe 3 is buried in the ground with a pump chamber 1 as a start point, and a sewage pump 4 is connected to the force feed pipe 3 through a valve 5 and a flowmeter 6. A compressor 7 for injecting air is connected to the force feed pipe 3 through an air pipe 8. In the pump chamber of the start point of the force feed pipe 3, oxygen consuming speed of a sewage is first measured to form a model. The oxygen consumed quantity in 1l of the sewage is determined every time band of the residence time in the pipe from the pump chamber 1 to a manhole 9. Then, an air quantity slightly exceeding the oxygen injection quantity determined from the sewage quantity and the oxygen consumed quantity is calculated, and air is injected. Thus, the sewage is prevented from being anaerobic atmosphere in the force feed pipe 3, and the formation of hydrogen sulfide can be prevented.

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